

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A laser diode/electro-absorption-modulator (LD/EAM) driver comprising:
 - a cascoded output switch having a pair of output devices and a pair of cascode devices;
 - a resistor providing tail current to the output devices;
 - a predriver circuit receiving an input signal and controlling the output devices;
 - a feedback circuit coupled to the resistor to control ~~the~~ a modulation current of the output devices by control of bias on the predriver circuit; ~~and,~~
 - a common mode feedback circuit providing modulation dependent currents for the predriver circuit; ~~and,~~
 - a cascode bias circuit coupled to bias the cascode devices to a bias voltage responsive to a power supply voltage, the output bias current and the modulation current.
2. (Currently Amended) The LD/EAM driver of claim 1 further comprised of ~~a~~ an output bias circuit providing for on-chip summation of the modulation and an output bias current at a low impedance node of the active cascode device.
3. (Canceled)
4. (Currently Amended) The LD/EAM driver of claim ~~3~~ 1 further comprised of a PTAT bandgap reference circuit to generate biasing currents with positive temperature coefficients for the predriver circuit ~~gain stages~~.
5. (Original) The LD/EAM driver of claim 4 wherein the modulation current is externally adjustable.

6. (Original) The LD/EAM driver of claim 1 wherein the modulation current is externally adjustable.

7. (Original) The LD/EAM driver of claim 1 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are externally adjustable.

8. (Original) The LD/EAM driver of claim 1 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are externally adjustable by a single external adjustment.

9. (Original) The LD/EAM driver of claim 1 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are independently externally adjustable.

10. (Original) The LD/EAM driver of claim 1 further comprised of a pulldown variance circuit coupled to the predriver, the pulldown variance circuit causing a turnoff current of the predriver to be larger than a turn-on current of the predriver.

11. (Currently Amended) The LD/EAM driver of claim 10 further comprised of a PTAT bandgap reference circuit to generate biasing currents with positive temperature coefficients for the predriver circuit~~gain~~ stages.

12. (Original) The LD/EAM driver of claim 11 wherein the pulldown variance circuit is responsive to the output of the bandgap reference.

13. (Currently Amended) A laser diode/electro-absorption-modulator (LD/EAM) driver comprising:

- a cascoded output switch having a pair of output devices and a pair of cascode devices;
- a resistor providing tail current to the output devices;
- a predriver circuit receiving an input signal and controlling the output devices;

a feedback circuit coupled to the resistor to control ~~at the~~ modulation current of the output devices by control of bias on the predriver circuit;

a common mode feedback circuit providing modulation dependent currents for the predriver circuit; and,

a cascode bias circuit coupled to bias the cascode devices to a bias voltage responsive to ~~at the~~ power supply voltage, ~~the~~ an output bias current and the modulation current.

14. (Original) The LD/EAM driver of claim 13 further comprised of a PTAT bandgap reference circuit to generate biasing currents with positive temperature coefficients for the predriver gain stages.

15. (Original) The LD/EAM driver of claim 14 wherein the modulation current is externally adjustable.

16. (Original) The LD/EAM driver of claim 13 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are externally adjustable.

17. (Original) The LD/EAM driver of claim 13 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are externally adjustable by a single external adjustment.

18. (Original) The LD/EAM driver of claim 13 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are independently externally adjustable.

19. (Original) The LD/EAM driver of claim 13 further comprised of a pulldown variance circuit coupled to the predriver, the pulldown variance circuit causing a turnoff current of the predriver to be larger than a turn-on current of the predriver.

20. (Currently Amended) The LD/EAM driver of claim 19 further comprised of a PTAT bandgap reference circuit to generate biasing currents with positive temperature coefficients for the predriver circuit ~~gain stages~~.

21. (Original) The LD/EAM driver of claim 20 wherein the pulldown variance circuit is responsive to the output of the bandgap reference.

22. (Currently Amended) A laser diode/electro-absorption-modulator (LD/EAM) driver comprising:

- a cascoded output switch having a pair of output devices and a pair of cascode devices;
- a resistor providing tail current to the output devices;
- a predriver circuit receiving an input signal and controlling the output devices;
- a feedback circuit coupled to the resistor to control a ~~the~~ modulation current of the output devices by control of bias on the predriver circuit;
- a common mode feedback circuit providing modulation dependent currents for the predriver circuit;
- a cascode bias circuit coupled to bias the cascode devices to a bias voltage responsive to a ~~the~~ power supply voltage, an ~~the~~ output bias current and the modulation current;
- a PTAT bandgap reference circuit to generate biasing currents with positive temperature coefficients for the predriver circuit ~~gain stages~~; and,
- a pulldown variance circuit coupled to the predriver, the pulldown variance circuit causing a turnoff current of the predriver to be larger than a turn-on current of the predriver.

23. (Original) The LD/EAM driver of claim 22 wherein the modulation current is externally adjustable.

24. (Original) The LD/EAM driver of claim 22 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are externally adjustable.

25. (Original) The LD/EAM driver of claim 22 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are externally adjustable by a single external adjustment.

26. (Original) The LD/EAM driver of claim 22 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are independently externally adjustable.

27. (Canceled)

28. (Currently Amended) The LD/EAM driver of claim ~~27~~26 wherein the pulldown variance circuit is responsive to the output of the bandgap reference.